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EXAMINER	
GUPTA, MUKTESH G	
ART UNIT	**PAPER NUMBER**
2444	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/518,576	ASAZU ET AL.	
	Examiner	Art Unit	
	Muktesh G. Gupta	2444	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 July 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-13,15-17,19-21 and 23-43* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-13,15-17,19-21 and 23-43* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. **Claims 1, 13, 17, 21, 16 and 20** are amended.

   Claims 2, 14, 18 and 22 are cancelled.

   Claims 1, 3-13, 15-17, 19-21 and 23-43 are presented for examination have been examined on merits and are pending in this application.

Response to Amendment

2. Acknowledgment is made for Applicants Amendments for claims filed on 07/17/2009.

   Applicant's amendment necessitated remapping ground(s) of rejection as presented in this office action.

   Applicant's arguments are deemed moot in view of the following remapped grounds of rejection as explained here below, necessitated by Applicant's substantial amendment to the claims which significantly affected the scope thereof.

   Applicant's arguments with respect to amended **Claims 1, 13, 17, 21 and 43,** have been considered but are moot in view of the remapped ground(s) of rejection.

Response to Argument

3. Acknowledgment is made for Applicants Remarks filed on 07/17/2009.

   Applicant's arguments have been fully considered but they are not persuasive.

Applicant argues: Logan does not disclose all the limitations of **Claims 1, 13, 17, 21 and 43.**

In particular Logan fails to disclose: *"means that specifies an installation region of a terminal apparatus of the one or more user devices to be a delivery destination according to the information delivering means".*

Logan discloses as stated in par. [0047], [0130], [0319-0320], Data describing the demographics of individual users and data specifying user preferences stored at 117 may be used to selectively provide the user with only that portion of the available metadata which is best suited to the needs of the user or which a third party, such as an advertiser, desires to make available to the user. Metadata can be developed to characterize individual program segments by processing log file data representing choices made by users in selecting and/or abandoning programs, and from program ratings expressly provided by users. When aggregated by retrieving and combining such data from many users, and when further correlated with demographic data about the same users, rating information can be provided which tends to indicate what other viewers having similar backgrounds and similar past preferences preferred among the currently available program materials. In the display shown in FIG. 4, the video picture is shrunk to provide an empty area for the index in on the side, resulting in extra space in the vertical dimension that is used for a multiple-function information pane 412. This space may be used for a variety of things, including displaying a more detailed description of the highlighted segment, or for displaying

advertising. The additional information about the selected or playing segment may include a short synopsis or web links associated with the content as illustrated at 510 in FIG. 5. Advertisements displayed in the information pane 412 may be selected based on the content of the then-selected segment. For instance, an advertisement could be displayed at 412 for a video on demand (VOD) movie related to the topic in the then-playing segment. These ads could also be interactive, allowing a viewer to "click on" the ad to play a recorded full-motion promotional video, or to link to a web site using the data download facility 240, while the previously playing program was paused (that is, concurrently recorded for later time-shifted viewing if desired). The advertising displayed in the information pane 412 may also be personalized to each household, or to the current viewer, by using stored preference or demographic data to select advertisements which are more likely to be of interest to the particular household or viewer. A combination of content monitoring and viewer/household preference data may be used to select the advertisement displayed);

In particular Logan fails to disclose: "*information changing means that changes contents of related information and/or reference information, which should be delivered, according to the installation region".*

Logan discloses as stated in par. [0331-0335], [0473-0477], Metadata which describes programs and the segments which make up those programs may be advantageously stored in a relational, hierarchical or object-oriented database, preferably with the ability to accept and deliver data in XML format. The principal

data entity stored describes an instance of a "show;" that is, an entity that defines content that is made available in a specific market, at a specific time, on a specific day. This entity, called a ShowInstance, is a data object from which market data, general show data, and specific segment data can be extracted in order to separate instances for reusability and scaling purposes. Each ShowInstance specifies its airdate, what market it is in, what show it is, and an ordered list of GSpots (detailed information about a program segment) with start/end times. A Market will be defined by zip code, MSO, and name, as well as potential scheduling information. Generalized Show information consists of the show's name, type, duration, and general synopsis data. A key part of data will be our GSpots. The GSpot will be our detailed breakdown of shows. The database may further hold User Generated information consisting of User contributed GSpots, as well as potential membership information. The user section of the database will grow as the user base expands and uses the system and provides a potential for the gathering of demographic, viewing, and usage data that may be used to identify individual preference data for users as well as aggregate data such as program popularity ratings and "hotspots." The segment-based system contemplated by the invention permits users to mix content across different shows creating in essence new "virtual shows". Content could be pulled from any number of sources--different VOD systems, a PVR, or off the Internet. The process of combining the content pieces would be done using supplied metadata. For instance, a user can select attributes (sport, team, company,

character, actor, artist/singer, and category) and have the system automatically and dynamically assemble content for viewing. Additionally, if the VOD system knows what is stored locally, regionally, or nationally and its "availability", the system can filter for the viewer currently available or efficiently accessible content. Based on the segment currently being viewed, advertising segments could be dynamically pulled from a database that would be personalized by the type of content that surrounded the ad as defined by the metadata schema. Currently ads for a normal broadcast might be inserted based on the surrounding contents (for example, advertising for snow tires inserted in the weather report). In addition, advertising may be inserted into the viewing stream based on the personal traits of the viewer. As contemplated by the present invention, ad placement can be a function of both the surrounding context and the identity of the viewer.

In particular Logan fails to disclose: *"bulletin board system uses a date and time when the remark is written as retrieval conditions".*

Logan discloses as stated in par. [0282], [0361-0366], user interface presented to a user for program library and playlist management may be designed using the interface for an email client as a metaphor. Just as email is "pushed" at the user and then sorted, read, and filed, a playlist manager presents a list of program segments that are available in the user's personal library. Programs, which have previously been played, may be identified by a distinctive type font or color. Once listened to, the style in which the program segment is listed is changed. Users

may sort the program listing list by artist, program name, date and time of capture, source (e.g. radio station call letters), recording quality, user rating, and other parameters. Multiple sort fields will be allowed; for example, the listing could be sorted by source first, and then by time of capture. Any program on the list may be selected (by clicking or by entering its list number). When selected, a given program listing may be immediately played in its entirety, a "sweet spot snippet" only may be played as a preview, or the selected segment may be added to a playlist, or moved to a user-created and user-named "folder," or to a system -created folder. An index listing of segments is manifested as a collection of metadata which defines an ordered set of program segments that may be replayed in the order listed in the absence of some intervention by the viewer. Hence, these segment indexes are also termed "Playlists." Viewers will have the ability to select one or more segments from one or more show indices and create a playlist for later playback. The selection of the segments could be automatic (for instance if a search was performed requesting a list of segments on a specific topic) or manual whereby a viewer would peruse the indices and their attributes for one or more shows and select manually segments to be added to a playlist. The manual creation process could be assisted by automated techniques. For instance, a football game could be sorted by type of play, and then a user could manually select all the pass catches of interest to create an All-Star playlist. Each playlist could at any time be reordered by the viewer, again on a manual basis, or by sorting on specific attributes (such as date, channel,

subject matter, etc.). A dynamic playlist can be discarded after using it or could be permanently stored as a named playlist file for later viewing. Such playlist files can also be sent to other viewer households for use in similar systems.

Hence Examiner considers Logan discloses all the features of **Claims 1, 13, 17, 21 and 43**, and maintains his rejection as stated below.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 1, 3-13, 15-17, 19-21 and 23-43** rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application Publication No. 20030093790 to Logan, James D. et al., (hereinafter "Logan").

As to Claims 1, 13, 17 and 21, *Logan discloses content related information provision apparatus, method, program and bulletin board system that provides related information on contents including reference data arranged in time series, the apparatus comprising* (as stated in par. [0043-0046], [0103], The methods and apparatus contemplated by the present invention facilitate the selective storage, organization and

reproduction (playback) of broadcast programming through the use of metadata that identifies and describes segments of that broadcast programming. FIG. 1 illustrates in schematic form the manner in which information is processed. At the remote location, broadcast programming from a source 100 is received at 101 and may be processed immediately or saved in a storage unit 103 for later processing. At 105, the incoming broadcast signals are parsed or subdivided into logically separate segments, which need not be contiguous and which may be overlapping or nested. As illustrated at 111, metadata is then created which describes each of the identified programming segments. The metadata describing each segment may take the form of a separate data entity, or may be stored or transmitted with the content of programming segment, which it describes. Unless the metadata is associated with a particular segment by being stored or transmitted with that segment, it includes a pointer or some other mechanism for specifying the segment or segments it describes. In addition, the metadata typically includes additional descriptive information about the associated segment(s). The metadata created at 111 may be immediately processed or transmitted to the user after it is created, or may be stored for later processing or transmission in a storage unit illustrated at 113. The user's ability to create and share metadata that describes, classifies or relates to selected broadcast programming segments thus enables users to create a community surrounding those segments in which a rich variety of information exchanges and transactions can occur. Users can, in effect, use the subject matter of broadcast programming as public bulletin board upon which to post comments about the program, ratings and descriptive data which can be used as a basis for indexing and

retrieving program content, and for linking in related information from other sources, or for conducting a marketplace by posting offers to sell and to buy goods or services relating to or suggested by program content):

related information receiving means that receives related information on contents from one or more user devices, the related information including an identification of the contents, user remarks to the contents, and a reference time position of the user remarks relating to the contents (as stated in par. [0051], [0048] and [0115-0118], Metadata created at the remote location and transmitted via the communications facility 130 may be stored at 133 at the user location. The metadata stored at 133 may be edited at the user location as indicated at 135, and metadata from the user location may be returned via the communications facility 130 to the remote location for shared use by others. Metadata created by the user, or preference data supplied by the user or derived from an analysis of the user's use of the system, or from the viewer's demographic characteristics, may be combined with or used instead of metadata and preference data created at the remote location. Whether the metadata which relates to programming segments is created at the remote source or at one or more user locations, it is frequently desirable to organize or filter the metadata so that they user can more easily obtain the benefit of that metadata which best fits the needs or desires of the individual user. The user's specifications may be uploaded via the communications facility 130 and stored at 117 at the remote facility. The user's specifications or preferences as stored at 117 are then used at 115 to select only that metadata which best fits the user's needs for transmission to the user's metadata

storage at 133. The user's preferences may be derived from his or her activity. For example, the particular programs a user chooses to save or view may be monitored to determine the user apparent content preferences. Preference data may be produced at the user's location and stored with other metadata in the store 133, from which it may be used locally or sent to the remote location for use there. Alternatively, "user log" data recording the user's activity may be transmitted to the remote location where it is analyzed to produce preference data);

related information storing means that stores the received related information; reference information receiving means that receives reference information from the one or more user devices, the reference information including a keyword specifying contents to be referred to by the user remarks to the contents and specifying a data time reference position in the contents; reference information storing means that stores the received reference information (as stated in par. [0096], [0054], [0057-0059], a viewer may transmit a request to the remote facility for additional information about a particular program (which may include multiple segments), or the preferences of the user as stored in 117 may be expressly stated by the user or derived from the user's viewing history. These requests and/or preferences stored at 117 may then be used at 115 to select desired metadata (including references to metadata stored elsewhere) in the store 113 for transmission to the requesting user. Unless received in already parsed form from the remote location, the incoming broadcasts are parsed at 145 into segments that correspond to the segments created at the remote location at 105. As noted earlier, the available metadata may be used to subdivide the incoming broadcast

signals into segments. For example, the metadata may identify incoming segments by source and by start and end times. Alternatively, the metadata may include "fingerprint" or "signature" signal pattern that can be compared with incoming broadcast signals to identify particular segments, and may further include timing information, which specifies the beginning and ending of each segment relative to the location of the unique signature. As illustrated in FIG. 1 at 180 and 135, the user may create descriptive metadata and may edit metadata previously received or created in a variety of ways to personalize the storage, reorganization and playback of available broadcast programming. It is also important to note that the parsing, selection and modification processes may be performed at different times using, in each case, the most recently stored version of the programming content and the metadata that is available at that time. For example, metadata that is used to parse incoming segments at 145 may be made available from the parser 105 at the remote facility at an earlier time than descriptive metadata arrives from the remote creation process 111. The presence of the storage unit 143 allows received broadcasting signals to be held until parsing metadata arrives which will subdivide the received programming into logical units that can then be still later selected and modified with the aid of descriptive metadata that arrives only after it is created by the remote editing process. Note also that the metadata which arrives first to subdivide the programming stream into logical segments, as well as available metadata which describes those segments, facilitates the task at the user location of generating still further supplemental metadata which describes, rates, annotates or recommends programming content for other users);

and information delivering means that searches the related information storing means for matching related information that matches at least one of the keyword or the time reference position of the reference information from the reference information receiving means, and transmits the matching related information for displaying on a display at a specific user device from among said one or more user devices, and that delivers at least one of the stored-matching related information or the stored reference information to the one or more user devices (as stated in par. [0050], [0078-0080], The communication methods or apparatus used to transport metadata and/or content to the user as illustrated at 130 may take many different forms, including: the Internet, a dialup telephone connection through the public switched telephone network (PSTN), a wireless transmission system, cable, private line facilities, or data storage media transported from the content publisher and/or the metadata creator to the user. The communications may take place over a combination of such facilities and, as noted earlier, the content and metadata may be transmitted in one or both directions together or separately over the same or different facilities. If the metadata is not positionally associated with the segments it describes by being imbedded with, or transmitted at the same time as, the content data, some of the metadata performs the function of identifying the associated program content. Stored segments may be identified by a file name, a URL, or by some other unique access key (such as the primary key value in a relational database storage system). When segments can be identified and accessed when needed using such an access key, simply including that key value with the descriptive metadata suffices. However, when metadata created at the remote location must be associated with

program content received at the user location, a different mechanism is needed. As one approach, the program segment may be specified by the combination of an identifier which specifies a broadcast program source (e.g. a particular broadcasting station or cable channel) together with the start and ending times at which the particular programming segment was broadcast. These "time stamp" values are sent with the metadata to the user location and matched against time stamp information associated with the broadcast programming when received at the user station);

means that specifies an installation region of a terminal apparatus of the one or more user devices to be a delivery destination according to the information delivering means (as stated in par. [0047], [0130], [0319-0320], Data describing the demographics of individual users and data specifying user preferences stored at 117 may be used to selectively provide the user with only that portion of the available metadata which is best suited to the needs of the user or which a third party, such as an advertiser, desires to make available to the user. Metadata can be developed to characterize individual program segments by processing log file data representing choices made by users in selecting and/or abandoning programs, and from program ratings expressly provided by users. When aggregated by retrieving and combining such data from many users, and when further correlated with demographic data about the same users, rating information can be provided which tends to indicate what other viewers having similar backgrounds and similar past preferences preferred among the currently available program materials. In the display shown in FIG. 4, the video picture is shrunk to provide an empty area for the index in on the side, resulting in extra space in the vertical dimension that is used for

a multiple-function information pane 412. This space may be used for a variety of things, including displaying a more detailed description of the highlighted segment, or for displaying advertising. The additional information about the selected or playing segment may include a short synopsis or web links associated with the content as illustrated at 510 in FIG. 5. Advertisements displayed in the information pane 412 may be selected based on the content of the then-selected segment. For instance, an advertisement could be displayed at 412 for a video on demand (VOD) movie related to the topic in the then-playing segment. These ads could also be interactive, allowing a viewer to "click on" the ad to play a recorded full-motion promotional video, or to link to a web site using the data download facility 240, while the previously playing program was paused (that is, concurrently recorded for later time-shifted viewing if desired). The advertising displayed in the information pane 412 may also be personalized to each household, or to the current viewer, by using stored preference or demographic data to select advertisements which are more likely to be of interest to the particular household or viewer. A combination of content monitoring and viewer/household preference data may be used to select the advertisement displayed);

and information changing means that changes contents of related information and/or reference information, which should be delivered, according to the installation region (as stated in par. [0331-0335], [0473-0477], Metadata which describes programs and the segments which make up those programs may be advantageously stored in a relational, hierarchical or object-oriented database, preferably with the ability to accept and deliver data in XML format. The principal data entity stored describes an instance of

a "show;" that is, an entity that defines content that is made available in a specific market, at a specific time, on a specific day. This entity, called a ShowInstance, is a data object from which market data, general show data, and specific segment data can be extracted in order to separate instances for reusability and scaling purposes. Each ShowInstance specifies its airdate, what market it is in, what show it is, and an ordered list of GSpots (detailed information about a program segment) with start/end times. A Market will be defined by zip code, MSO, and name, as well as potential scheduling information. Generalized Show information consists of the show's name, type, duration, and general synopsis data. A key part of data will be our GSpots. The GSpot will be our detailed breakdown of shows. The database may further hold User Generated information consisting of User contributed GSpots, as well as potential membership information. The user section of the database will grow as the user base expands and uses the system and provides a potential for the gathering of demographic, viewing, and usage data that may be used to identify individual preference data for users as well as aggregate data such as program popularity ratings and "hotspots." The segment-based system contemplated by the invention permits users to mix content across different shows creating in essence new "virtual shows". Content could be pulled from any number of sources--different VOD systems, a PVR, or off the Internet. The process of combining the content pieces would be done using supplied metadata. For instance, a user can select attributes (sport, team, company, character, actor, artist/singer, and category) and have the system automatically and dynamically assemble content for viewing. Additionally, if the VOD system knows what is stored locally, regionally, or

nationally and its "availability", the system can filter for the viewer currently available or efficiently accessible content. Based on the segment currently being viewed, advertising segments could be dynamically pulled from a database that would be personalized by the type of content that surrounded the ad as defined by the metadata schema. Currently ads for a normal broadcast might be inserted based on the surrounding contents (for example, advertising for snow tires inserted in the weather report). In addition, advertising may be inserted into the viewing stream based on the personal traits of the viewer. As contemplated by the present invention, ad placement can be a function of both the surrounding context and the identity of the viewer),

wherein the content referred to in the matching related information was already distributed or will be distributed to the one or more user devices (as stated in par. [0276], [0271], the central server, or the local system, may generate playlists based on a combination of shared and personal data. The shared data may identify program segments (e.g. songs or informational segments), which go together and further indicate a preferred playback sequence for associated segments. The personal data may be based on the user data (locally available or uploaded to the server and stored at 117), which may identify which program segments are available to the user and which segments have been previously played, and when. This shared and personal data is then processed to produce a recommended personalized playlist, which is made available to automate the user's playback sessions. Metadata labels may be displayed in a list, or as subtitles, to assist the user in rapidly locating desired segments for playback. A mosaic of images, each selected from a single segment, may be displayed

as a visual cue to assist the viewer in locating a desired segment from a sequence of segments. When the metadata includes descriptive text, keyword searches can be performed to identify segments described with matching words).

As to Claims 3, 15, 19 and 23, *Logan discloses content related information provision apparatus, method, program and bulletin board system according to claims 1, 13, 17 and 21, wherein the contents refer to a broadcast program, and the reference information includes information specifying a broadcasting station, which broadcasts or has broadcasted a program, and information specifying a date and time when a reference part in a program is broadcasted or has been broadcasted* (as stated in par. [0080], [0136], [0097-0101], when metadata created at the remote location must be associated with program content received at the user location, a different mechanism is needed. As one approach, the program segment may be specified by the combination of an identifier which specifies a broadcast program source (e.g. a particular broadcasting station or cable channel) together with the start and ending times at which the particular programming segment was broadcast. These "time stamp" values are sent with the metadata to the user location and matched against time stamp information associated with the broadcast programming when received at the user station. For example, a TV program segment may be identified by data indicating the segment was broadcast by WGN beginning at 11:23:42 to 11:32:16 GMT on Oct. 12, 2000. The metadata may be transmitted with the programming content, or may be transmitted at a later time, or over a different communication pathway. In many program transmission

systems, some of the available bandwidth is allocated to metadata, as typified by program guide channels or time slots provided by the vertical blanking interval (VBI) in a television signal. These existing pathways may be used to transfer the metadata contemplated by the present invention which contemplates, in many implementations, the transfer of metadata after the programming material has been broadcast but before the programming material is viewed on a delayed or time-shifted basis after having been recorded earlier. The metadata which is created by created by and shared among users one or a combination of the following forms: (1) Qualitative (rankings, reviews, etc.); (2) Descriptive (summary, topics, etc.); (3) Segment identifications (start time, elapsed time, ending time, source, detectable characteristic, ancillary codes); and (4) Cross-references or pointers to metadata stored at addressable resource locations, including metadata created and hosted by other users).

As to Claims 4-5, 16, 20 and 24, *Logan discloses content related information provision apparatus, method, program and bulletin board system according to claims 3, 13, 17 and 23, wherein the reference information specifies a broadcasting station, which broadcasts or has broadcasted a program, using a channel number* (as stated in par. [0015], [0361-0364], [0440-0441], A remote editing station, which may be at the broadcast facility or at a remote location, classifies, describes or otherwise identifies individual segments of broadcast programming and sends metadata (sometimes referred to as "markup data") identifying and describing those segments to a remote client receiver. For example, the markup data may identify individual segments by

specifying the source and the time of the original broadcast, or by specifying some other unique characteristic of the broadcast signal. The program segments may be TV, radio, or Internet programs, or portions of programs, including individual songs, advertisements, or scenes. An index listing of segments is manifested as a collection of metadata which defines an ordered set of program segments that may be replayed in the order listed in the absence of some intervention by the viewer. Hence, these segment indexes are also termed "Playlists." In general, as noted earlier, segments have any number of attributes associated with them. These attributes could be the basis for creating playlists, that is, a listing of segments that represents a subset of all the segments or a subset of some existing subset of segments. A "show index" is a playlist of the segments that makeup a broadcast program or "show" with the segments being listed in the order originally broadcast. A user-created playlist may identify segments that may or may not be in a different order than the original broadcast. In addition, the segments in different playlists may have different start and stop times and not be based on any particular segmentation scheme for breaking the show into segments. Viewers will have the ability to select one or more segments from one or more show indices and create a playlist for later playback. The selection of the segments could be automatic (for instance if a search was performed requesting a list of segments on a specific topic) or manual whereby a viewer would peruse the indices and their attributes for one or more shows and select manually segments to be added to a playlist. The manual creation process could be assisted by automated techniques. For instance, a football game could be sorted by type of play, and then a user could manually select all the

pass catches of interest to create an All-Star playlist. Each playlist could at any time be reordered by the viewer, again on a manual basis, or by sorting on specific attributes (such as date, channel, subject matter, etc.). The largest and most frequently distributed collections of metadata are normalized prior to distribution. Playlist metadata files are normalized to increase efficiency with the least amount of complexity. This is accomplished by requiring each destination or distribution node to have a small bit of intelligence which employs a configuration file to map the metadata to its local channel configuration. The configuration file distributed to end devices is called a Media Guide (MG). In addition to describing to a client device how to retrieve the metadata file (i.e. what the file name is), the Media Guide also informs the client device which upcoming programs will have associated metadata. Using the Media Guide, a provider or client device may modify its EPG to include indicators telling users ahead of time which programs will have metadata available for them. The Media Guide itself includes cable head end identifiers and local channel numbers which, coupled with program broadcast times, are then mapped to a single unique identifier for a program. This unique identifier is then used as the file name for the metadata file containing normalized playlists for distribution).

As to Claims 6 and 27, *Logan discloses content related information provision apparatus and bulletin board system according to claims 1 and 21, wherein the information delivering means includes identification information of a site handling information resources related to contents in the reference information and delivers the*

identification information (as stated in par. [0229], [0102], Although the present invention contemplates that metadata which is created at one location and made available to another location and further that this metadata relates to broadcast programming content that is independently available at both locations. Where appropriate, when content available at the location where the metadata is created is not already available at a destination location, it may be transmitted with the metadata. For example, locally created content (such as home video recordings) may be stored at the user location, described by metadata, and both the content and the metadata may be distributed. In addition, program content providers may authorize the redistribution of their content under appropriate conditions (for example, under the condition that the advertising is not deleted), in which case both the content and the metadata which was obtained from another source, or metadata created locally by a viewer, may be made available to other users. In one preferred mode, metadata stored at 133 and published by a user through a central server location or by a direct peer-to-peer connection may include the URL or identifier of the program content which may be retrieved by another user who selects in by first displaying its descriptive metadata. Metadata that includes the URL of a World Wide Web resource provides a robust mechanism for associating the content of particular segments of broadcast programming to both additional information and related interactive transactions. For example, metadata may be associated with programming that permits viewers to learn more about or to purchase products or services related to the programming content. As described above, individual users may also create addressable resources, such as Web pages, and associate links to those

resources with viewed programming segments. For example, a fan club for a particular actor might create a Web site devoted to that actor, and then share metadata containing the URL to that Web site with other viewers).

As to Claims 7 and 28, *Logan discloses content related information provision apparatus and bulletin board system according to claims 1 and 21, wherein the information delivering means includes information for correcting deviation of a clock in a terminal apparatus to be a delivery destination in the reference information and delivers the information* (as stated in par. [0081], [0084], [0094], At times, predetermined time shifts occur when programs are distributed over cable facilities and the like. When that occurs, predetermined time offsets can be added to or subtracted from the values specified in the metadata, either before or after the metadata is transmitted to the user location. The magnitude of these standard offsets may be determined by detecting the time when predetermined signal patterns are received at the user location, comparing that time with the time when that signal pattern was broadcast as measured at the remote station to generate the offset value to be applied to all segments experiencing the same time shift as the predetermined signal pattern. When the metadata is created, a "signal pattern," or "fingerprint" extracted or derived from the content is used to identify a known time position in the "parent" copy of the version from which the metadata is created. This fingerprint or pattern may also uniquely identify the parent copy, distinguishing it from other content. This fingerprint exists at a measurable time offset from an "index point" in the parent copy used to associate metadata with the

content. For instance, if the metadata were marking the beginning of an advertising segment, the fingerprint should be within and near the start of that advertising segment. Alternatively, the fingerprint to be detected to establish the time mark may be within only the first of a sequence of segments, with the first and remaining segments having start times and end times expressed by offsets from the single time mark. As an alternative, the metadata provided by users may include segment identification information. For example, a user may identify a segment of programming by marking its beginning and end, and then create metadata, which describes, rates or classifies that segment. Programming at the user location creates identification metadata for the segment using any of the techniques discussed earlier; for example, by extracting and transmitting a unique fingerprint from the identified programming and transmitting this fingerprint together with start and end offsets, or by identifying the programming source together with the time stamp information specifying the times at which the beginning and end of the segment were originally broadcast).

As to Claims 8 and 29, *Logan discloses content related information provision apparatus and bulletin board system according to claims 1 and 21, wherein the information delivering means includes a characteristic amount of contents at a reference position in the contents in the reference information and delivers the characteristic amount* (as stated in par. [0082], [0097-0101], technique of detecting predetermined signal patterns may be used to establish not only the timing but also the identity of a segment of a sequence of segments. For example, one or more a unique "signatures"

may be extracted or derived from a sequence of programming segments from a particular source. The metadata for individual segments may then include values that specify a time offset from the signature marker and, in that way, uniquely identify the segment. Thus, the metadata which is created by created by and shared among users one or a combination of the following forms: Segment identifications (start time, elapsed time, ending time, source, detectable characteristic, ancillary codes); and Cross-references or pointers to metadata stored at addressable resource locations, including metadata created and hosted by other users).

As to Claims 9 and 30, *Logan discloses content related information provision apparatus and bulletin board system according to claims 1 and 21, wherein the information delivering means delivers plural pieces of reference information collectively* (as stated in par. [0048], [0361], metadata created by the user, or preference data supplied by the user or derived from an analysis of the user's use of the system, or from the viewer's demographic characteristics, may be combined with or used instead of metadata and preference data created at the remote location. An index listing of segments is manifested as a collection of metadata which defines an ordered set of program segments that may be replayed in the order listed in the absence of some intervention by the viewer. Hence, these segment indexes are also termed "Playlists").

As to Claims 10 and 33, *Logan discloses content related information provision apparatus and bulletin board system according to claims 1 and 21, wherein the*

information delivering means delivers the related information and/or the reference information in accordance with an HTTP (Hyper Text Transfer Protocol) (as stated in par. [0104], [0102], Programming may be described, classified and rated using metadata formats. Standard rating systems have been widely promulgated using the World Wide Web Consortium (W3C) Platform for Internet Content Selection (PICSJ). The PICS specification enables labels (metadata) to be associated with content and was originally designed to help parents and teachers control what children access on the Internet, but also facilitates other uses for labels, including code signing and privacy. PICS labels, and other metadata, may be advantageously expressed using the W3C's Resource Description Framework (RDF) which integrates a variety of web-based metadata activities including sitemaps, content ratings, stream channel definitions, search engine data collection (web crawling), digital library collections, and distributed authoring, using XML as an interchange syntax. Metadata that includes the URL of a World Wide Web resource provides a robust mechanism for associating the content of particular segments of broadcast programming to both additional information and related interactive transactions. For example, metadata may be associated with programming that permits viewers to learn more about or to purchase products or services related to the programming content. As described above, individual users may also create addressable resources, such as Web pages, and associate links to those resources with viewed programming segments. For example, a fan club for a particular actor might create a Web site devoted to that actor, and then share metadata containing

the URL to that Web site with other viewers (HTTP protocol is generally used to transfer web based (metadata) over the Internet)).

As to Claims 11-12 and 34-35, *Logan discloses content related information provision apparatus and bulletin board system according to claims 1 and 21, wherein the information delivering means delivers the related information and/or the reference information in accordance with an SMTP (Simple Mail Transfer Protocol), wherein the information delivering means designates a character string, which is capable of identifying reference information, in a header of a delivery message at the time of delivery of reference information* (as stated in par. [0223-0224], [0284-0285], Similarly, one user could bookmark an individual program or a segment of a program, associate a recommendation or comment with the bookmarked content, and make the program or program segment identification data and the comment or recommendation available to a special interest group or to a specific individual. In order to distribute metadata to designate users, it may be structured to include addressee data which specifies individuals or groups, so that bookmarking metadata of this kind can be affirmatively pushed to targeted users, or pulled by users who request metadata contributed for their specific attention, or for the attention of a group to which they belong. Using the facilities of an interactive digital cable television networks, a viewer could be watching a show live and want to recommend it to another friend. Using a remote control, the user could select one or more friends from a preset displayed list and then transmit to those designated persons a "watch this" message that might be displayed as close-captioned

text on the friend's screen. Properly programmed, the receiver could provide the option to open a window on the TV screen for a PIP ("picture-in-picture") display of the recommended show. Alternatively, using the Internet, a message could be sent via an instant bookmarking messaging connection or by email to a designated person or persons (Email program generally use SMTP protocol for sending emails over the Internet with the email message containing, Header information such as From To, Subject fields). Program segments identified in a playlist or folder may be shared with others; that is, the metadata may be transmitted to others for inclusion in their huntlists or program library if the underlying material is already available, along with a covering "forwarding memo" from the sender. Metadata may be transferred in a standard format as a MIME attachment to email, or may be shared using other forms of peer-to-peer transfer. An application particularly suitable to video, the user might prefer an alternative to working off of a list, which could require the user to go back and forth between the list and the video screen. In this case, program listings and selection menus may be superimposed over the image, or in window or frame adjacent to the viewing area. Visual prompts, which characterize the currently viewed programming, may also be displayed. For instance, short descriptions of the program segment, a rating value, an indication of the source and time of the original broadcast, or any other information derived from the metadata may be displayed concurrently with the program).

As to Claims 25-26 and 31-32, *Logan discloses bulletin board system according to claim 21, wherein the information processing unit is further configured to transmit a*

name of a bulletin board, in which a corresponding remark is written, with the name included in the reference information, wherein the information processing unit is further configured to transmit corresponding remark content with the user remark included in the reference information (as stated in par. [0091-0092], [0097-0103], [0105], [0107], [0128], metadata describing the segments identified during the parsing process at 105 may be created at 111 in a variety of ways and stored at 113 for potential distribution to users. In addition, metadata created by users may be received via the communications facility 130 to supplement or replace the metadata created at 111. Metadata created by users may be shared directly between users. When shareable metadata exists at a user location, it may be "registered" by supplying its resource address (such as an Internet URL) to the remote location which then relays the URL to other users who directly access the descriptive metadata from the other user's metadata storage 133 in a peer-to-peer transfer. In this form, the remote facility shown in FIG. 1 operates as a registry or directory that permits users to share descriptive metadata about broadcast programming with one another on a community basis. Thus, the metadata which is created by created by and shared among users one or a combination of the following forms: 1. Qualitative (rankings, reviews, etc.); 2. Descriptive (summary, topics, etc.); 3. Segment identifications (start time, elapsed time, ending time, source, detectable characteristic, ancillary codes); 4. Cross-references or pointers to metadata stored at addressable resource locations, including metadata created and hosted by other users. The user's ability to create and share metadata that describes, classifies or relates to selected broadcast programming segments thus enables users to create a community

surrounding those segments in which a rich variety of information exchanges and transactions can occur. Users can, in effect, use the subject matter of broadcast programming as public bulletin board upon which to post comments about the program, ratings and descriptive data which can be used as a basis for indexing and retrieving program content, and for linking in related information from other sources, or for conducting a marketplace by posting offers to sell and to buy goods or services relating to or suggested by program content. To optimize the benefit of the community markup, program guide data may be made available to potential users to identify what stations to record. As users can't go back after a broadcast and record it, this method would insure the maximum number of recorded copies will be available both for markup and playback with any CM effort. Improved markups may be downloaded and used to improve previously recorded songs or other content stored at 143, 147 or 153 in an automatic mode. Thus, even if several days elapse before the improved markup is available; the existing recording library would be automatically upgraded. This upgrading of the library would be performed transparently to the user. Metadata created by individual users may be simply stored locally at 133 as an Internet accessible resource. Web crawling "spider" programs executing on remote computers may then retrieve and index this metadata and then act as "search engine" directories that may be publicly accessed to locate metadata of interest).

As to Claim 36, *Logan discloses bulletin board system according to claim 23, further comprising:*

a specification unit that, concerning a program series to be an object of an argument in a bulletin board specifies a broadcast schedule for the next broadcast of the series (as stated in par. [0264], One of the most important mechanisms for assisting a user in locating desirable programming is the use of metadata to enhance the content and operation of the electronic program guide. Metadata indicating a user's preferences which is derived from both the preferences directly expressed by the viewer and by preferences inferred from the user's viewing and metadata creation activities may be used to selectively display and highlight particular programs in the program guide listing. Icons or highlighting may be used to identify listed programs and segments for which additional metadata is available for display to the user upon request. Metadata which ranks programs may be displayed using rating icons, color coding, or highlighting to guide the viewer toward higher rated programs);

and a unit that transmits the broadcast schedule to a terminal apparatus of a request source of the one or more user devices (as stated in par. [0265], Note that program guides may display listing of previously broadcast materials which are available in local storage, broadcast programming which will be available currently and in the future for viewing and recording, and "content on demand" programming which exists as retrievable resources on program servers and on storage maintained by other users and shared on a peer-to-peer basis with other users. Metadata describing all such programming content may be located using an electronic program guide format which permits the extensible display of additional metadata and the selection of particular program content for viewing and recording).

As to Claim 37, *Logan discloses bulletin board system according to claim 36, further comprising:*

a setting unit that sets a bulletin board for each program series and performs download of the program schedule from a screen displaying information in the bulletin board or a screen displaying a list of remarks in the bulletin board (as stated in par. [0103-0107], [0224], The user's ability to create and share metadata that describes, classifies or relates to selected broadcast programming segments thus enables users to create a community surrounding those segments in which a rich variety of information exchanges and transactions can occur. Users can, in effect, use the subject matter of broadcast programming as public bulletin board upon which to post comments about the program, ratings and descriptive data which can be used as a basis for indexing and retrieving program content, and for linking in related information from other sources, or for conducting a marketplace by posting offers to sell and to buy goods or services relating to or suggested by program content. To optimize the benefit of the community markup, program guide data may be made available to potential users to identify what stations to record. As users can't go back after a broadcast and record it, this method would insure the maximum number of recorded copies will be available both for markup and playback with any CM effort. Improved markups may be downloaded and used to improve previously recorded songs or other content stored at 143, 147 or 153 in an automatic mode. Thus, even if several days elapse before the improved markup is available; the existing recording library would be automatically upgraded. This

upgrading of the library would be performed transparently to the user. Using the facilities of an interactive digital cable television networks, a viewer could be watching a show live and want to recommend it to another friend. Using a remote control, the user could select one or more friends from a preset displayed list and then transmit to those designated persons a "watch this" message that might be displayed as close-captioned text on the friend's screen. Properly programmed, the receiver could provide the option to open a window on the TV screen for a PIP ("picture-in-picture") display of the recommended show).

As to Claim 38, *Logan discloses bulletin board system according to claim 23, further comprising:*

a specification unit a rebroadcast schedule for a program to be an object of a remark; and a unit that transmits the rebroadcast schedule to a terminal apparatus of a request source (as stated in par. [0132], When programming is broadcast in one geographic area before being broadcast in another, or when programming is repeated, the viewing and listening behavior of users exposed to the earlier broadcast can be used to provide rating information for later users. Thus, the habits of TV viewers on the east coast of the United States could be analyzed in advance of the later rebroadcast of the same programming on the west coast, so that ratings data tending to reflect which of the programs were preferred may be supplied to west coast viewers in advance).

As to Claim 39, *Logan discloses bulletin board system according to claim 38, wherein the transmitting means transmits the rebroadcast schedule with the rebroadcast schedule included in reference information* (as stated in par. [0132], In addition, west coast viewers would have the benefit of advance reviews and summaries of programs created during the earlier broadcast. In the same way, any viewer using a personal video recorder (PVR) or other means for accessing program materials on a delayed basis could be aided in the selection of that program which they, as individuals, would be most likely to enjoy by the availability of rating and review metadata from earlier viewers having similar interests).

As to Claim 40, *Logan discloses bulletin board system according to claim 21, further comprising:*

a designation unit configured to designate retrieval conditions for a remark; and a retrieving unit configured to retrieve a remark across plural bulletin boards on the basis of the designated retrieval conditions (as stated in par. [0222], [0260-0263], metadata is placed in addressable location; other users may retrieve it on a peer-to-peer basis. In this arrangement, a user might be simply supplied with a list of URLs at which other users having similar backgrounds, or viewers who were known and trusted, could post reviewable metadata. In this way, a user could affirmatively recommend certain programming and affirmatively discourage other users from viewing other programming. the metadata, which is available to the user, may include electronic program guide (EPG) data for displaying a listing or matrix of available programming,

including both live programming and recorded programming. The user may select items from this EPG display to record or play incoming broadcasts (or both), may play previously recorded programming, or may identify future programming to be recorded. During playback of recorded material, and during the recording of new material, a progress bar that shows the location within a program that is currently being viewed can be displayed at the user's requests, typically occupying only a portion of the screen while the video content occupies the remainder. Segment markers can be noted on the bar and associated with icons to indicate the presence of descriptive metadata. Using a mouse or remote control to "click on" or select a segment displayed on the content bar would then alternatively cause the metadata associated with that segment to be displayed, or would resume playback of content at the beginning of the selected segment. Segments as shown on the progress bar could be color coded based on a program rating to enable the user to quickly view highly rated segments, or to skip lower rated segments. In addition, metadata about segment quality or other attributes may be displayed on the screen using suggestive icons (smiling faces, frowning faces, etc.) while a segment is being shown helping viewers to more quickly decide whether to hit the "next segment" button or a channel surfing button on a remote control unit. Icons indicating the availability of additional descriptive metadata may also be displayed on the progress bar, or associated with programs listed in a displayed program guide. Because metadata may exist in many forms from many sources, the user may be given the opportunity to enter display preferences that control the manner in which metadata is displayed. Thus, metadata from especially trusted sources may be preempting

regular programming and be provided with use of the entire screens, while other metadata may be displayed as closed captioned text or as icons, or without any display unless the view specifically requests the presentation of metadata for a particular program segment).

As to Claim 41, *Logan discloses bulletin board system according to claim 40, wherein the bulletin board system uses a keyword included in a remark or designated separately at the time of writing the remark as retrieval conditions* (as stated in par. [0129], [0271], metadata created by individual users may be simply stored locally at 133 as an Internet accessible resource. Web crawling "spider" programs executing on remote computers may then retrieve and index this metadata and then act as "search engine" directories that may be publicly accessed to locate metadata of interest. For example, a search for "Stardust" might locate metadata describing an audio recording of the song by that name, biographic programming about the composer or performing artists, and the like. Thus, the descriptive metadata created by professional editors and/or users can form the basis for finding and enjoying content that would otherwise be difficult to index because of its non-textual character. Metadata labels may be displayed in a list, or as subtitles, to assist the user in rapidly locating desired segments for playback. A mosaic of images, each selected from a single segment, may be displayed as a visual cue to assist the viewer in locating a desired segment from a sequence of segments. When the metadata includes descriptive text, keyword searches can be performed to identify segments described with matching words).

As to Claim 42, *Logan discloses bulletin board system according to claim 40, wherein the bulletin board system uses a name or an ID of a user who has written the remark as retrieval conditions* (as stated in par. [0223], [0242], Similarly, one user could bookmark an individual program or a segment of a program, associate a recommendation or comment with the bookmarked content, and make the program or program segment identification data and the comment or recommendation available to a special interest group or to a specific individual. In order to distribute metadata to designate users, it may be structured to include addressee data which specifies individuals or groups, so that bookmarking metadata of this kind can be affirmatively pushed to targeted users, or pulled by users who request metadata contributed for their specific attention, or for the attention of a group to which they belong. When advertising that is provided as part of the content programming, or inserted into the content as noted above, the user may press an "information" button (normally used to trigger a display describing the program currently being played) to obtain additional information about the advertised product. In this way, the user identifies products and services about which he or she has a particular interest, and the advertiser is able to provide information (including the URL of an Internet resource containing detailed information), which would otherwise be unavailable to the user).

As to Claim 43, *Logan discloses bulletin board system according to claim 40, wherein the bulletin board system uses a date and time when the remark is written as*

retrieval conditions (as stated in par. [0282], [0361-0366], user interface presented to a user for program library and playlist management may be designed using the interface for an email client as a metaphor. Just as email is "pushed" at the user and then sorted, read, and filed, a playlist manager presents a list of program segments that are available in the user's personal library. Programs, which have previously been played, may be identified by a distinctive type font or color. Once listened to, the style in which the program segment is listed is changed. Users may sort the program listing list by artist, program name, date and time of capture, source (e.g. radio station call letters), recording quality, user rating, and other parameters. Multiple sort fields will be allowed; for example, the listing could be sorted by source first, and then by time of capture. Any program on the list may be selected (by clicking or by entering its list number). When selected, a given program listing may be immediately played in its entirety, a "sweet spot snippet" only may be played as a preview, or the selected segment may be added to a playlist, or moved to a user-created and user-named "folder," or to a system - created folder. An index listing of segments is manifested as a collection of metadata which defines an ordered set of program segments that may be replayed in the order listed in the absence of some intervention by the viewer. Hence, these segment indexes are also termed "Playlists." Viewers will have the ability to select one or more segments from one or more show indices and create a playlist for later playback. The selection of the segments could be automatic (for instance if a search was performed requesting a list of segments on a specific topic) or manual whereby a viewer would peruse the indices and their attributes for one or more shows and select manually segments to be

added to a playlist. The manual creation process could be assisted by automated techniques. For instance, a football game could be sorted by type of play, and then a user could manually select all the pass catches of interest to create an All-Star playlist. Each playlist could at any time be reordered by the viewer, again on a manual basis, or by sorting on specific attributes (such as date, channel, subject matter, etc.). A dynamic playlist can be discarded after using it or could be permanently stored as a named playlist file for later viewing. Such playlist files can also be sent to other viewer households for use in similar systems).

Action Final

5. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Muktesh G. Gupta whose telephone number is 571-270-5011. The examiner can normally be reached on Monday-Friday, 8:00 a.m. -5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William C. Vaughn can be reached on 571-272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MG

/William C. Vaughn, Jr./

Supervisory Patent Examiner, Art Unit 2444